

CLAIMS

1. A method of manufacturing an electrically
conductive member having an electrically conductive
5 film on a surface of a substrate, comprising the
steps of: (i) forming a layer containing a colloid on
a porous surface of the substrate having at least the
porous surface by applying a colloidal solution and
(ii) forming an electrically conductive layer by
10 drying the layer containing the colloid.

2. The method of manufacturing an electrically
conductive member according to claim 1, wherein the
colloid is a metal colloid.
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3. The method of manufacturing an electrically
conductive member according to claim 1, wherein the
metal is silver, gold, platinum and palladium.

20 4. The method of manufacturing an electrically
conductive member according to claim 1, wherein the
method includes the step of forming the layer
containing the colloid by applying the colloidal
solution to the porous surface by a spin-coating
25 method.

5. The method of manufacturing an electrically

conductive member according to claim 1, wherein the method includes the step of forming the layer containing the colloid on the porous surface in a position-selective manner.

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6. The method of manufacturing an electrically conductive member according to claim 1 or 5, wherein the layer containing the colloid is formed in a position-selective manner by applying the colloidal solution to the porous surface by an inkjet method.

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7. The method of manufacturing an electrically conductive member according to any one of claims 1 to 6, wherein vicinity of the porous surface, including the surface, has a pseudobehmite structure.

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8. The method of manufacturing an electrically conductive member according to any one of claims 1 to 7, wherein the following condition is satisfied when it is assumed that an average particle diameter of the metal colloid is $\phi 1$ ave and that an average pore diameter of the porous surface is $\phi 2$ ave:

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$$\phi 1 \text{ ave} \geq \phi 2 \text{ ave.}$$

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9. An electrically conductive member manufactured by the method according to any of claims 1 to 8.

10. An electrically conductive member having an electrically conductive film on a porous surface of a substrate, the electrically conductive film being a dried film of a wet applied film containing colloidal
5 particles.

11. The electrically conductive member according to claim 9 or 10, wherein the electrically conductive member has portions in contact with an
10 organic semiconductor.